07-18-00 A

PTO/SB/05 (11-90)

PATENT APPLICATION TRANSMITTAL LETTER

Docket Number (Optional)

To the Commissioner of Patents and Trademarks:

Transmitted herewith for filing is the patent application of DARRELL METCALF

RESIDING AT: 905 N. OAK AVE, FILLMORE, CALIFORNIA 9301

entitled ORDERING, SCHEDULING AND RESERVATION SYSTEM FOR EXPEDITED COMMERCE BETWEEN INTERNET BROWSING APPARATUS AND ONE OR MORE PHYSICAL VENUES

Enclosed are:

- [x] FIVE sheets of drawings.
- [ ] an assignment of the invention to _____
- [x] executed declaration of the inventors. (OATH)
- [ ] a certified copy of a _____ application.
- [ ] associate power of attorney.
- [x] a verified statement to establish small entity status under 37 CFR 1.9 and 1.27.
- [ ] information disclosure statement
- [ ] preliminary amendment
- [ ] other: CERTIFICATE OF MAILING DATED JULY 17, 2000, 35 PAGE SPECIFICATION, CLAIMS AND ABSTRACT, POST CARD "RECEIPT OF CONTENTS"

CLAIMS AS FILED

	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE				345.00
TOTAL CLAIMS	- 20 =	* 19	x 9ea	171.00
INDEPENDENT CLAIMS	- 3 =	*	x	
MULTIPLE DEPENDENT CLAIM PRESENT			x	
* NUMBER EXTRA MUST BE ZERO OR LARGER			TOTAL	$ 516.00
If applicant has small entity status under 37 CFR 1.9 and 1.27, then divide total fee by 2, and enter amount here.			SMALL ENTITY TOTAL	$ 516.00

- [x] A check in the amount of $ 516.00 to cover the filing fee is enclosed.
- [ ] The Commissioner is hereby authorized to charge and credit Deposit Account No. _____ as described below. I have enclosed a duplicate copy of this sheet.
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July 17, 2000
Date

Darrell Metcalf
Signature

VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR	Docket Number (Optional)

Applicant or Patentee: DARRELL METCALF

Serial or Patent No.: _____

Filed or Issued: _____

Title: ORDERING SCHEDULING AND RESERVATION SYSTEM FOR EXPEDITED COMMERCE BETWEEN AN INTERNET BROWSING APPARATUS AND ONE OR MORE PHYSICAL VENUES

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- [x] the specification filed herewith with title as listed above.
- [ ] the application identified above.
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I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

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Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

DARRELL METCALF		
NAME OF INVENTOR	NAME OF INVENTOR	NAME OF INVENTOR
Signature of inventor	Signature of inventor	Signature of inventor
JULY 17, 2000		
Date	Date	Date

ORDERING, SCHEDULING AND RESERVATION SYSTEM FOR EXPEDITED COMMERCE BETWEEN AN INTERNET BROWSING APPARATUS AND ONE OR MORE PHYSICAL VENUES

CROSS REFERENCE TO RELATED APPLICATION

The present non-provisional application relies substantially on disclosure within provisional application Serial No. 60/144,210 filed July 19, 1999.

BACKGROUND OF THE INVENTION

Field of the Invention

This invention is related to the field of network-facilitated commerce systems, and in particular to a system and method for expediting commerce with internet browsing apparatus and ordering, reserving and scheduling networked-computer systems to achieve a dual-commerce system and method between a large-scale network and one or more physical venues offering merchandise, services and/or activities. The system communicates via a network such as the international global network (Internet) to coordinate and automate and consolidate online transactions, or interactions, and to schedule and/or sequence reserveable excursions to expedite transactions, or interactions, at any in a variety of venues, including those providing multiple points of interest, or multiple customer transactions, or interactions. The invention further pertains to venues having scalable designated 'Expedited Service Areas' at, or near to, their locations to provide scheduled transaction, or interaction, services to attendees who have--prior to their arrival at the venue-location--employed the system to order, schedule or reserve one or more venue deliverables, such as goods, services, and/or activities. In one embodiment of the invention, the browsing apparatus includes a handheld device having wireless communications capability for further enhancing attendee or customer interaction, convenience and the expediting of their schedulable visits to venues and their points of interest. The system also optimizes attendee or customer flow rates such that venue staffing can be optimally and respectively scheduled according to the degree of scheduled attendee or customer traffic at each venue.

SUMMARY OF THE INVENTION

In recent years developers of mall-based facilities and store chains have been faced with numerous challenges relating to the need to improve the customers' experience when shopping at such facilities. Often such experiences are quite frustrating, for example, due to congestion, parking difficulties, or finding out upon arriving at a venue that items are out of stock or aren't available in desired sizes, or that services or activities thought to be available before one's arrival are in fact not available when one arrives at a given venue. From a business owner perspective, other problems are prevalent. Various venues including, mall-based facilities and facilities incorporating a plurality of stores, or store-chains, have little or no means to optimize a traffic flow of customers and are often left with having to make a best-guess estimate of the number of staff personnel that will be required in a store for a given time of the week, month, or season of the year. Thus, such stores can often become either understaffed resulting in long lines and unproductive delays for their customers, or can be overstaffed which can significantly effect the profits of the business. It therefore, would be preferable to plan and build networked-venues having the means to substantially improve the customers' and merchants' experience, to provide expedited and schedulable customer interactions at a variety of venues such as those located within malls, entertainment complexes, or other facilities offering products, services and/or activities. And to optionally do so in engaging and entertaining ways. Furthermore, it would be preferable to business owners to have some means for optimizing staffing according to a schedulable flow of expedited customer interactions within their respective stores, service centers, or other venues.

The present invention is illustrated in the context of physical venue commerce which is facilitated and expedited by a networked communication with browsing apparatus to achieve a dual-commerce system and method. The browsing apparatus communicates via a networkable connection means such as a networked connection offered by an Internet Service Provider (ISP) and employs a web-browsing software program such as Microsoft® Internet Explorer®, or Netscape Navigator®. The system provides an online software user interface such as a Web Portal (or downloadable web browsing application or interface) which communicates with network-formatted information pertaining to the availability and purchasing details of deliverables offered at one or more networked-venues. Such information is stored in computer-

accessible storage means to provide customer-access to current databased data pertaining to product-related transactions, and current databased activity(s) and/or service(s) availability data for available activity(s) and/or service(s) transactions. The system's browsing apparatus, includes any in a variety of devices that are made for network browsing, including: computers; handheld personal information devices; cell phones and/or pagers; and the like. When connected to the system, the browser apparatus provides selection, ordering, and/or reservation of deliverables such as products, services and/or activities offered at one or more participating venues networked to the system. Such networked-venues can include any in a variety of product, activity(s) and/or service(s) venues such as those found at entertainment complexes, mall-based facilities, amusement parks, convention centers, stadiums, arenas, a store, or store-chain, service(s) or activity(s) facility, and the like. The system's browsing apparatus connects with an online software user interface which communicates with at least one networked-computer at each participating networked-venue. The venue's networked computer(s) and software which facilitate the selection, ordering, reserving and transaction confirmation of that venue's available deliverables. Online ordering of the venue'(s) deliverables are confirmed and recorded during each customer transaction and the record-keeping data pertaining to selected and reserved deliverables are updated real-time by the software, e.g. instantly adjusting the system's databased inventory record in the case of purchased merchandise; or, instantly adjusting service(s) availability or activity(s) availability during either of such transactions. A scalable designated area, for example a "Expedited Service Area" is provided at each networked-venue's location for expediting and culminating interactions customers' have reserved online. The system's software includes a reservation and scheduling means that query an updateable chronological software table of scheduled and available customer-events at networked-venues to reserve, schedule and sequence itineraries for customers whose transactions or interactions are to occur at one or more locations, or places. The reservation and scheduling means includes the means to create and adjust itineraries (whenever possible) around a customer's preferred schedule, or when a preferred schedule is not available, to provide schedules around a choice of one or more 'best-fit' (i.e. best available) itineraries. After completing and confirming one or more order online that will be culminated at one or more networked-venue, the customer then selects the best available itinerary and the system's software provides the customer the choice to either download the itinerary, for example to be used in a wireless handheld device, or print out an

itinerary record (by downloading it and printing it, or by printing it out from the Internet browser software). The schedulable itineraries provide highly convenient excursions which eliminate shopping frustrations due to congestion, parking difficulties (parking is schedulable), or finding out upon arriving at a venue that items are out of stock or aren't available in desired sizes, or that services or activities thought to be available before one's arrival are in fact not available when one arrives at a given venue.

Additionally, one or more facility having the system's network-enabled venues can also be equipped with customer interfacing means suitable for establishing a bi-directional communications link to thereby confirm customer identification (I.D.) so that further transactions or changes to scheduled sequenced steps can be made at such locations. Such interfacing means can include any one or more in a variety of known or commercially available input, or input/output (I/O) devices such as: an ATM-style interface; kiosk interface; or, other interface with one or more of the following input and/or output devices: a magnetic card-strip reader, or financial transaction card reader (e.g. for reading financial transaction card information, or credit card and/or membership card information); electronic-signature pad; a computer-interfaced keyboard, a computer-interfaced keypad, a PIN entry keypad, or wireless device transmission interface suitable for Infrared (IR) I/O, or other type of radio wave I/O (e.g. 'Blue Tooth'), and the like. With the employment of any one or more in a variety of customer interface means, the identified customer can further edit, add to, amend or reschedule itineraries. Thus a highly efficient reservation and scheduling system is provided which allows customers to conveniently move from networked-venue to networked-venue; from one point of interest to another; from one location to another; or, one place to another. For example, upon arriving at a facility equipped with the system and method of the present invention, customer itineraries (whether printed out, or downloaded into mobile handheld devices) can direct identified customers to a reserved parking spot and then to each scheduled interaction/activity and/or service. The customer is guaranteed online-reserved and confirmed orders for products, services and/or activities upon confirming their desired order and best-available itinerary, and is given the option when possible to also order deliverables online for home delivery. In the latter case, the customer is provided a means through the software of the system to shop, or order, from online representations of the deliverables of participating networked-venues, and to consolidate a plurality of such online orders from different participating venues into a one-time order

procedure. It is the current practice of eCommerce sites on the Internet to require a separate 'checkout' procedure for the shopping or ordering of deliverables in different categories, for example a book purchase from an eCommerce book seller website requires a separate checkout (ordering) procedure from the purchase of flowers from a separate online florist's website. By contrast, the present invention facilitates diverse deliverables ordering from separate-but-participating online-represented venues and consolidates the plurality of orders into expedited one-time order procedures. For example, a book, a DVD, and a dress, each sold by (and shown as available) by different online sellers is consolidated into a single online invoice or receipt indicating the separate price of each deliverable and the cumulative price (and where applicable the sales tax). The system's software automatically places the order with each seller (and optionally notifies their supplier of the sale) and deducts those deliverables from the available inventory. The software tracks the scheduled customer flow-rate at any participating venue and provides an optimum / known flow of customers from which each participating venue can more accurately predict and schedule required personnel. Thus, any expedited service area can be scheduled up to 100% capacity. The Expedited Service Area designated in any given venue is also optionally scalable to allow more customer transactions and/or interactions as more customers use the system's dual-commerce services to plan and schedule their network-enabled excursions. Such scalability provides a means for venues to operate at an optimum and known (scheduled) customer flow rate without the log-jamming experienced by customers at typical venues that are operated at full, or near to full, capacity.

Customers experience the benefits of guaranteed availability of deliverables whether purchased online and consolidated into a single-entry ordering procedure (which is then delivered to their homes or places of work), or when ordered and retrieved in highly convenient, schedulable excursions from Expedited Service Areas. Merchants experience optimized customer flow and flow rates to networked-venues and more predictable staffing needs. Merchants are also sent new and repeat customers and know in advance who, when and how many customers are being sent. Many of these customers who might otherwise not have come to a conventional physical venue--and perhaps simply shopped online at a potential low-priced competitor's website--are attracted by a new customer experience offering unprecedented efficiency and time-saving convenience. Merchant's suppliers are optionally notified automatically by the system's software as to the merchants' restocking needs (e.g. by a

networked order to a suppliers computer, by email, by fax, or by automated phone message, etc.).

It is the purpose of the present invention to address the shortcomings in existing and prevalent web-only commerce sites, and physical venue-only commerce, and to overcome the frustrations associated with, and experienced by, non-scheduled visitations of customers, or attendees, and to instead provide an efficient networked ordering, reservation and scheduling system for dual-commerce offering distinctive online, and physical venue customer and merchant experiences.

PRIOR ART

Several attempts have been made to provide improved customer interactions in retail environments and other physical venues, but the attempts have not been implemented in ways which were well coordinated for the customer(s) or the business owner(s), or in ways that used the power of an online network to order, reserve and schedule both online and physical venue transactions and/or interactions. The present invention consolidates ordering procedures and schedules optimal traffic flow when more than one facility, venue, or location of interest needs to be visited. By contrast, the previous methods have not implemented scheduling methods in a way that benefited both the store owner and the customer travelling between multiple venues. Additionally, they have not provided printable, or downloadable itineraries, or provided scheduling flexibility to amend, add to, or otherwise edit schedulable itineraries, transactions and/or interactions; or to download such schedules to convenient handheld devices which have various means for connectivity to a scheduling system.

From a customer perspective it has been possible to call by phone, ahead of time to arrange that a product, activity or service be reserved for pick up at a certain time. However, the customer has either done this ordering from memory, or from a static printed reference such as an ad or catalog, or from a very limited understanding of a facilities' entire offerings. Whereas, with the dual-commerce system and methods of the present invention it is possible for a customer to browse entire databased inventory(s) representing all available products, or all available services and/or activities, and to access such deliverables at one or a plurality of networked-venues, and to then schedule efficient sequenced visits (including the scheduling of

reserved parking). Thus highly organized and efficient excursions to one or more venue, place of interest, mall, or complex, and the like, is easily provided, and the inherent strengths of the Internet (or other network) to track and provide transaction accountability is employed by the dual-commerce system. Additionally, the coordinated scheduling makes it possible for store owners to enjoy network-enabled sales that send customer to the merchant's venue and to benefit from the knowledge of when such customers will arrive so that efficient staffing of the venues' personnel can also be achieved. Search of prior art has shown no systems, methods or apparatus to achieve such objects and advantages of the present invention, or its dual-commerce, order consolidating and scheduling/reservation methods including the system's capability to query an updateable software table of chronological scheduled and schedulable customer-events in order to schedule 'best-fit, or best available, downloadable itineraries for time-saving excursions to one or more networked-venues.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1A is a diagrammatical flow chart showing various browsing devices that can be linked in bi-directional communication with: a network connection means such as an Internet Service Provider (ISP); a user interface such as a browser software application e.g. Microsoft® Internet Explorer® or Netscape Navigator®; an identification means; and, a browsing/interface means such as Internet Portal, all of which provide access to at least one networked-venue.

Figure 1B is a continuation of the flow chart of Fig. 1A, whereby the browsing apparatus of Fig. 1A has bi-directionally linked communication with at least one interface to one or more activities, services and/or merchandise venue(s) and venue-condition editing, monitoring and reporting means, and an ordering, reservation and scheduling means to facilitate online ordering, home delivery of online deliverables, and to provide scheduled itineraries for the culmination of customer transactions or interactions at one or more networked-venue(s).

Figure 1C is a continuation of the flow chart of Fig. 1B showing the sequence following the arrival of a customer having a printed itinerary, or alternatively a downloaded schedule in a

handheld device, and his or her "Expedited" interaction with a single facility, or a multi-venue facility following customer identification and order confirmation.

Figures 2 and 3 are front views and top views respectively of an optimized networked-venue having a plurality of networked workstations which securely encircle an inventory of merchandise in a workstation system. Figure 3 shows an interior top view of the venue's automated pick-and-place robotics and record-keeping/updateable system, which is accessible by workstation access, including one or more optional ATM-Style stations at an exterior wall adjacent near to the workstation system.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figures 1A, 1B and 1C collectively represent a preferred embodiment of the present invention as a dual-commerce system and method for ordering, scheduling and reservation of one or more customer transactions or interactions, and should be referred to sequentially and interchangeably to follow the descriptions below. In Fig. 1A various types of network browsing apparatus such personal computer 100, handheld personal information device 102, and cellular phone and/or pager 104 are represent one or more networkable browsing device 106 that can be used to communicate with the system . The browsing devices have bi-directionally communication linkage via a wireless communications protocol, or via cable connections, to network connection means 108 such as an Internet Service Provider (ISP) or other provider of high-speed bandwidth connection to the Internet. Each of the browsing devices provide connection with a network such as the having an on-line protocol e.g. a transmission control protocol/internet protocol (i.e. "TCP/IP") but can alternatively be configured to connect with a variety of networks including LANs, WANs and the like. Network connection means 108 provides communication via a user interface 110 such as a web-browsing software program e.g. Microsoft® Internet Explorer®, or Netscape Navigator®. The web-browser provides communication with websites, Internet portals and the like via an identification verification means 112 such as any one or more in a variety of known software means for I.D. verification including user-entered passwords, keywords, user I.D. names, PIN numbers, and the like. Following I.D. verification, a user is granted access to browsing/interface means 114 such as an

Internet portal or other Internet site which--continuing on to the flow chart in Fig. 1B--provides communication with one or more networked-venues via online representations of physical venues (i.e. venues having physical locations to receive and serve customers). Browsing interface means 114 provides communication with: interface to one or more activities venues or facilities 116; interface to one or more services venues or facilities 136; or, interface to one or more merchandise venues or facilities 142. Interfaces 116, 136 and 142 communicate respectively with activities venue-condition editing, monitoring and reporting means 118, services venue-condition editing, monitoring and reporting means 138, and merchandise venue-condition editing, monitoring and reporting means 144. Monitoring and reporting means 118, 138 and 144 are comprised of one or more databases whose data represent current venue conditions. For example, networked-venue conditions at activities venues or facilities include data pertaining to availability, ordering, scheduling and reservation of activities at any one or more in a variety of activity networked-venues such as one or more: restaurant(s) 120; recreation facilities 126 e.g.theme parks, entertainment complexes, malls, arcades, health clubs and the like; theatre(s) 132 e.g. film and/or stage; arena(s) 134 events and activities such as skating, sporting events and live shows, etc. Venue conditions at services venues or facilities include data pertaining to availability, ordering, scheduling and reservation of services at any one or more in a variety of service networked-venues 140 offering one or more schedulable services, for example: health care such as eye care, skin care, dental, acupuncture, general medical; or hair care, nail care, massage; or, travel and accommodation services such as flights, car rentals, recreational outings bookings and recreational vehicle rentals, hotel accommodations; or, training, tutoring, seminars, classes or other educational sessions, etc. Venue conditions at merchandise venues include data pertaining to the availability and ordering of merchandise, and the reservation and schedulable pickup of reserved merchandise or goods at any one or more in a variety of merchandise venues 146 offering goods for sale or rental: retail stores, store-chains, themed retail, department stores, entertainment-content stores, supermarkets, malls, strip malls, dealerships, membership clubs, concession stands, and the like.

The networked-venue conditions are stored, amended and maintained as databased data in the venue-condition editing, monitoring and reporting means (118, 138, 144) and are accessible by, and communicate with, at least one venue-type interface to provide stored and regularly-updated data pertaining to the availability, ordering, reservation and/or scheduling of

online and physical venue deliverables. Such data is represented in the interface in a current databased selection from which customer choosing and ordering is facilitated--by any one or more in a variety of known online order-taking procedures. An ordering, reservation and scheduling means 154 records and stores customer-choices using transaction/interaction record-keeping & updating software 122. Means 154 also comprises one or more networked-computer having software routines for facilitating online ordering, and delivery, and for facilitating online orders that are subsequently culminated at one or more networked-venue(s)--following the scheduled arrival of the ordering customer and the verification of their identity at the physical location of the each of the networked-venue(s) offering the desired transaction(s) or interaction(s).

For example, in one scenario a customer's identity is verified online and he makes several orders from a plurality of online-represented networked-venues: flowers from one store; a dress from a second store; an audio CD and DVD from a third store; a meal from a restaurant; and, theatre tickets to a movie. For the flowers, dress and entertainment media, merchandise/venue-condition editing, monitoring and reporting means 144 is accessed via merchandise interface 142 and provides a current databased selection of merchandise that is easily browsed through--being categorized by type and name of the merchandise networked-venue, and by type of product(s), product(s) parameters that typically affect buying decisions (such as prices, taxes, sizes, dimensions, colors, product age/year); product(s) currently available, and so forth. For the meal and theatre tickets, activities/venue-condition editing, monitoring and reporting means 118 is accessed via activities interface 116. For one or more services, services/venue-condition editing, monitoring and reporting means 138 is accessed via services/browser interface 136. Online deliverables and venue-based deliverables are represented by any one or more in a variety of known online and/or downloadable media such as: text, line art, graphical depictions, photos, digital video files, digital audio files, computer-storable files, faxes, email, instant messaging, and the like.

As a plurality of selections are completed, ordering data is sent to at least one ordering, reservation and scheduling means 154 which includes software routines for querying, maintaining and editing a chronological table of customer-events: scheduled and schedulable 148. Ordering, reservation and scheduling means 154 keep a running and editable tally of each customer-order. For a plurality of online orders derived from different online-represented

networked-venues--i.e. orders for deliverables that will be sent for example, to a customers home or place of business--a running tally of all orders is consolidated by one or more software routines of means 154 into a single order-entry procedure (versus separate orders for each online-represented venue) and the consolidated online order is culminated and recorded when confirmed by the customer. Ordering, reservation and scheduling means 154 retains a record of each venue providing the deliverable(s) in the consolidated order and automatically calculates and allocates revenues to the merchants providing the online orders. The system also keeps a running tally and implements a similar record-keeping procedure for the online ordering of online-represented deliverables that are subsequently obtained from networked-venues. When shopping online for deliverables available at networked-venues, the customer selects an appropriate interface (116, 136, 142) and venue-type from which to make one or more order. Thus, diverse dual-commerce ordering is facilitated: at the online-represented flower shop (networked-venue) the customer orders two dozen roses; at the online-represented dress store a size 8 mango-colored of a specific manufacturer is selected; at online-represented entertainment-content venue the CD and DVD are easily selected--being logically categorized by media headings typically found in entertainment-content stores (including "Hits", "Specials" alphabetized "Artists", music and film genres, and so forth); the online-represented restaurant displays menu items from which a meal is selected and ordered; the theatre displays its current schedule of available tickets to feature films and a movie is selected and ordered.

The dual-commerce system optionally provides software routines that provide previews of streaming entertainment-content such as streaming audio, or streaming video.

After choosing such deliverables from the online-represented networked-venues (in this example products and activities), the ordering, reservation and scheduling means 154 queries chronological table 148 to determine one or more best-fit schedules available for time-saving excursions to the expedited service areas offered in each networked-venue. Optionally, means 154 can also query the customer for preferred time-windows during which he may wish to arrive and remain at one or more networked-venues. In the present example, the customer chooses late Friday or Saturday afternoon with the meal to begin approximately at 6:30 PM and the movie as soon thereafter as possible (Saturday is his specified preference). Means 154 contrasts the customers preferred schedule(s) against the table of currently scheduled and available customer-events and provides a best-fit choice of available itineraries based on the most efficient and most

convenient sequencing of the chosen customer-events (e.g. sequencing those events in a schedule requiring the least amount of the customer's time). Using the 6:30 meal time, the ordering, reservation and scheduling means 154 queries table 148 and finds a 6:15 time slot available on Saturday. Means 154 quickly scans the availability at other venues and proposes the following itinerary: the flower and dress shops are nearest one another so they are scheduled for customer expedited service in a time-window between 6:00-6:15; the entertainment-content store and theatre are next to the restaurant so the CD/DVD pick-up time-window is 7:00-7:15 with the film starting at 7:15 PM. So in less than and hour and fifteen minutes, the customer can eat a meal, 'shop' at three stores and begin watching his choice of a movie. If schedules seem too tight for comfort, the customer can request the system to expand the schedule duration, e.g. the one fifteen minute schedule can be expanded (as available) to 2 hours.

Thus a plurality of online orders can be consolidated by the system into a single online entry-form (and deliverables are then sent for example, to a customer's home or business), and a plurality of orders retrievable from networked-venues is consolidated by the system into a single itinerary which facilitates the culmination of the orders at the venues. The applicant of the present invention calls these dual-commerce advantages and benefits "Web Assisted Retail Purchasing™" and uses the acronym WARP™ to explain how customers can now experience WARP-Accelerated shopping.

As mentioned, the customer chooses and confirms his itinerary and selects a printout record 158 or downloadable itinerary 156 which can be downloaded to a computer for subsequent printing or downloaded to a portable apparatus such as a commercially available handheld wireless device. It is noted that although the present example illustrates the sequencing of customer-events that will be culminated at a plurality of chosen networked-venues, it is also possible to simply schedule and reserve a customer transaction and/or interaction at a single networked-venue. For example, in Fig. 1C a printed itinerary or downloaded schedule 160 can direct the customer to a single facility 162, or in the case of the example given above, to a multi-venue facility 164. In either case, a customer identification and order confirmation means 166--such as any one or more in a variety of known identification and order confirmation apparatus (including wireless bi-directionally linked confirmations, electronic signatures, the combination of financial transaction cards and card magnetic strip readers, and so forth)--precedes scheduled parking 168 (optional) and his transaction and/or interaction at a designated expedited service area 170. Such designated areas are within, adjacent to, or near to, the networked-venues. The

designated expedited areas are so marked and are easily discernable to the customer, and are staffed by personnel according to the flow of 'expedited' customer interactions that have been scheduled before the customer's arrival.

Each culminated order is automatically reported back--via one or more order-reporting software routines--to the relevant venue-condition editing, monitoring and reporting means (118, 138, 144) via reporting step 176. Additional transactions and/or interactions 172 (by the same customer) at other networked-venues are handled by one or more software routines which tracks, records and tallies subsequent use of customer identification and order confirmation means 166 and/or subsequent transaction and/or interaction at respective designated expedited service area 170 of such networked-venues. When the customer is done 174, the cumulative transactions and/or interactions are reported to one or more venue-condition editing, monitoring and reporting means (118, 138, 144) via reporting step 176. The report is also routed to ordering, reservation and scheduling means 154 to adjust the availability of schedules in chronological table 148 and transaction/interaction record 122 which additionally calculates, records and reports revenues and/or commissions for each transaction/interaction and does so according to the types of purchases made. Customer orders, reservations and schedules (and relevant data pertaining thereto) are also communicated to merchants via merchant access 124 as orders are made and confirmed. Optionally merchants can choose to have one or more suppliers automatically notified of each sale, or when merchant-configurable restocking thresholds are reached.

In one embodiment of the invention, the system can optionally accommodate real-time requests for itinerary breaks when the customer is using, or about to use, an itinerary. For example, customers may wish to rest or take an unscheduled detour. In such cases, ordering, reservation and scheduling means 154 queries and adjusts schedules as available in chronological table 148 and reports schedule options to the customer for his or her choosing via a customer's portable communications device such as wireless personal digital assistant ('PDA'), or via a venue-based itinerary-displaying and/or printing system (e.g. one or more networked computer and coupled printer, not shown). In larger venues such as amusement parks, or theme parks, means 154 simply swaps break requests between a plurality of customers and re-schedules customer-events as available. For example, in the following scenario, it's 11:20 AM, 'customer A' has two events scheduled between 11:30 AM and noon but has just made a half hour break

request at a networked-venue computer, and 'customer B'--who has a half hour break scheduled between 11:30 AM and noon and the same two events as 'customer A' scheduled a half hour later (noon to 12:30 PM)--now wishes to prioritize the scheduled events *before* his break and he uses the Internet connectivity of his wireless device to make his request. The system easily accommodates both customers wishes by buffering all pending requests while querying changes and current conditions in chronological table 148. One or more software routines compare the scheduled data and requested changes and--in the example of 'customer A' and 'customer B' instantly swaps those customers requested breaks with their previously scheduled events.

Thus a highly efficient, flexible dual-commerce system offering both conventional online ordering and delivery 152 and the improved convenience of schedulable itineraries to one or more networked-venue(s) is provided. The merchants of the networked-venues receive customers that the system sends them--customers who might otherwise have simply shopped online if not for the new customer experiences being offered, including added-value time-saving convenience and same-day availability of deliverables at networked-venues. No waiting in long lines or wondering if desired goods, activities or services, will be available (including in the right size, model, shape, color, etc.). The system ensures availability of, and reserves, the customers' transactions and/or interactions at all participating networked-venues. The customer passes quickly from expedited service area to expedited service area using a minimum of time, and schedule changes are easily accommodated. The system also creates a seamless economy whereby customers and merchants receive current online and venue-condition status, commissions are automatically calculated for all orders and, optionally suppliers are automatically informed as to the restocking needs of networked-venues. Furthermore, the customer can pre-pay all orders online, meaning that little or no cash need be carried by the customer to networked-venues, which is an added security benefit.

In another embodiment of the present invention, the designated area for expedited service includes the incorporation of any one or more in a variety of known receivers or transceivers of wireless transmissions suitable for communications with the type of wireless devices mentioned above. Expedited service areas can also include magnetic card strip readers for customer identification and order confirmation purposes. In either case, the facility's wireless devices or transceivers, or card readers, are employable as an efficient and quick verification means of the expedited-customer's identification, order information, price confirmation, and other expedited

service advantages. Additionally, handheld devices having screens that are easily readable, can optionally be equipped with machine readable code that is suitable for downloading and displaying scheduled itinerary information which is received from the Internet, or from wireless transceivers (or received when temporarily coupled to a computer). For example, the customer's sequenced itinerary can be displayed as a running or real-time updateable schedule on the screen display of his or her device and can include automated, or user-configurable prompts that occur minutes ahead of any given event. For instance, "Dinner in ten minutes", "CD pickup available in 20 minutes", "The film starts in 45 minutes", and so on.

Bi-directional interactions of wireless devices facilitate quick 'checking in' at a each venue and can include software to automatically update display-screen data and check-off and/or hide listed events when orders or events are completed, and/or provide useful information as to the next stop on one's itinerary. For example, the screen may read "Your next stop is on level two on the opposite side of the mall, you're currently here on level one", "Your car is parked in section B3, to exit, go to the opposite end of the mall and proceed down the escalator one level". Handheld devices equipped with a graphical user interface ('GUI') and schedule-displaying software can graphically or pictorially represent such instructions in virtually any type of facility including: a mall, entertainment complex, amusement park, convention hall, stadium, arena, and the like, using photographs, diagrams, maps, or other graphical depictions and can direct its user with graphical elements such as arrows to indicate which way he or she should proceed relative to their current position, and relative to their desired destinations in their expedited excursion (itinerary).

In the event that the handheld device also includes, or optionally provides, direction-finding hardware and software, for example 3-Com's PalmPilot® can be equipped with a Global Positioning System (attachable accessory), the device can be equipped with software for displaying destinations relative to the current location of the customer and show the customer--for example with a directional arrow relative to a graphically depicted map--which way to go relative to their current position and one or more destination in their scheduled itinerary.

Some handheld devices also include audio capability, in which case directions by audio-equipped devices can be given audibly, as can current schedule information, which would be very useful for the visually impaired. It is noted that such navigating features would be particularly helpful in large area venues or complexes, including amusement parks, stadiums,

arenas, fairs, or large conventions, and the like, where becoming geographically disoriented can easily occur. Thus one's movement from one place to another (a facility, an attraction, a booth, the aisles of a market or store, and so on) can be logically and efficiently sequenced by the apparatus of the present invention. Additionally, navigation with a graphical user interface assisted by a GPS further expedites one's sequenced excursion while optionally providing timing information as to estimated travel-time, walking or waiting time, relative to a particular point of interest, facility, attraction, booth, and the like.

Other benefits are achieved with the aforementioned GUI and/or audio capable devices such as employing graphical and/or audio messaging that is instructive and/or entertaining and engaging. As the speed, LCD displays and memory capabilities of such devices improve, it will be practical to add audio and/or video clips (whether resident in the unit, downloaded therein, or played as 'streaming' files--as communications bandwidth permits), including the use of famous clips and quotes from multimedia sources such as film libraries, cartoon libraries, or audio recordings, any of which can be chosen by the user according to the user's tastes and are selectable by the user from a database of various themes, personalities, actors, comedians, musicians, performers, athletes, leaders, politicians, and other famous figures. Such clips and/or recordings are also employable (through the employment of software routines) in a manner that makes sense in the context of, and is synchronous with, the customers' transactions, interactions and scheduled itinerary--and can also include entertaining media and recordings (whether related to their transactions or not) that can be played back on their handheld device. For example, a comedic clip might say "I'm trying to think but nothing happens" as a user is waiting for access to a particular piece of information.

Figures 2 and 3 are front views and top views respectively of an optimized networked-venue having a plurality of networked workstations which securely encircle an inventory of merchandise as a workstation system. Figure 3 shows an interior top view of the venue's automated pick-and-place robotics and record-keeping/updateable system, which is accessible on-line and by workstation access, including one or more optional ATM-Style stations at an exterior wall adjacent near to the workstation system.

By way of example, Figures 2 and 3 depict an embodiment of the invention which is further comprised of a networked-venue workstation system 12 representing an optimized networked-venue. Workstation system 12 has a plurality of workstations 26 that serve as

customer ordering bays from which in-store products can be ordered and automatically retrieved. As seen in Fig. 3 a plurality of networked workstations 26 are arranged to encompass and secure an inventory of merchandise 16 within workstation system 12 such that the inventory is out of reach to customers until purchased--thus eliminating the need and costs for individual entertainment-content security apparatus and store-wide tag detection electronic security systems. The workstations are each comprised of a networked computer/graphical user interface and display 48, with each computer thereof providing connectivity to the Internet and to a customer I.D. and ordering confirmation means 64 including transaction and interaction software routines of the types previously described in reference to Fig. 1B. Whether employed in a mall-based facility, or a an independent store-chain facility, workstation system 12 is optimized for automated record updating of inventory and order information, providing both remote networked access and local access (e.g. in-store) via a networked interface to one or more merchandise venues 142 employing the methods previously described in reference to Fig. 1B.

The workstation system is further comprised of one or more designated areas 24 (Fig. 3) such as an 'Expedited Service Area' for expedited customer interactions, and optionally includes the location of one or more ATM-Style bays 28 located adjacent to an external wall of the facility--including one or more of the external bays also having an expedited transaction designated area 24. The bays have cable coupling, or wireless communication with, at least one networked computer 14 having venue-condition editing, monitoring and reporting means 144 of the type previously described in reference to Fig. 1B. The customer identification and order verification means 64 of the workstation/ordering-bays can also be configured to provide wireless transceivers and/or financial card strip readers to expedite transactions. Optionally entertaining and engaging audio and/or visual clips that help facilitate user interaction can also be employed. Like the multimedia clips and recordings employed by the handheld devices, multimedia use at the workstations can also expedite and improve the user's shopping experience--such that entertaining clips make sense in the context of the user's transactions and are entertaining, and optionally configurable to the user's taste. Thus, the workstation interface can appear to be talking to and/or instructing the customer by employing a contextual sequencing of appropriate clips or recordings relating to their current interactions and relative to their transactions. Additionally, the user can be provided with a diverse library of multimedia files to pre-select desirable personalities (e.g. famous, notorious, dysfunctional, comedic etc.), themes,

scenes, songs, song clips, and so forth, and can be selected when the system is accessed remotely, or while being operated from an ordering-bay. It is noted that although the emphasis in the previous description has been on commerce and in particular dual-commerce as it pertains to workstations in a designated expedited service area, it is also noted that workstations in non-designated areas provide similar functionality and are of service to regular walk-in customers.

The external ATM-Style bays 28, provide up to 24 hour per day automated transactions for example, when used in conjunction with the pick-and-place robotics of the workstation system 12 (as depicted in FIG. 3) bays 28 can be used to retrieve purchases or rentals, and for the return and re-stocking of the latter, around the clock.

Figure 2 is a front view of the workstation system 12, the workstations 26 are accessible via a ramp 46 leading to an elevated walkway 36 having a handrail 44 extending upward from an outer perimeter of the walkway. Each workstation has a networked computer/graphical user interface and display 48 providing a user interface to facilitate a selection, ordering and/or retrieval of inventoried goods (16 of FIG. 3) secured within an inner diameter of the annular structure 52 supporting the walkway and workstations. Each workstation is equipped with a customer identification and order verification means 64 such as a wireless transceiver that can communicate with a customer's handheld device, or a magnetic card strip reader. It is noted that by inventorying the goods, such as audio CDs, DVDs, CD-Roms, Video Games, Videos and the like, within the annular structure, that customers will not have access to any of the stock until it is ordered and paid for. Thus shoplifting is eliminated as are the substantial security costs associated with securing such valuable goods. For example, it is not uncommon for stores having a significant volume of such media, to pay in excess of $100-200K in security related equipment, which provides no added-value to the consumer in terms of their shopping experience. Often stores must also employ full-time security personnel thwart or discourage shoplifting--adding the expense of their salaries to the security overhead. Furthermore, stores utilizing plastic CD security-locks on media have to replace those locks every few years due to damage and scuffing, and the process of removing the locks significantly slows down customer transactions. By contrast, the methods employed in FIG.S 2 and 3 eliminates the security concern by securely enclosing the inventory (out of sight) and uses the resource of security monies formerly required to add enhancements to the customer-experience.

All available in-store inventory is clearly shown and easily browsed through on the workstation display and selectable by customers at the workstation via one or more computer-coupled or computer communicating input device (i.e. goods representation and ordering are similar to product browsing and ordering functionality provided by eCommerce websites). When the networked-venue is of a type that provides entertainment-content the dual-commerce system optionally provides: software routines for streaming entertainment-content such as streaming audio, or streaming video; and computer-accessible playback means for previews of other digitally-recorded content (such as CDs, DVDs, and files stored in non-volatile memory and/or hard disk-based devices). Such computer-automated browsing of current inventory eliminates the hunting of product that may or may not be available down any number of aisles in a conventional store. If stock is not available for on-screen ordering and immediate retrieval, the customer is offered automatic delivery as soon as it is available.

An example of re-directing investment and constructively using the monies formerly required for security and security overhead, is the employment of an immersive and dynamic 360 degree screen 40 which is positioned adjacent to the upper edge of the annular structure 52 such that rear-projection images can be panoramically or segmentally projected onto the screens by a ring of projectors 42 (seen in FIG. 3) including live images from remote locations and/or pre-recorded images. The panoramic or segmented screen content is dynamic and engaging to passersby and workstation customers and produced to heighten the customers experience. Optionally, for increased security and/or enhanced customer engagement, workstation cameras 30 can be provided for interactive participation with other customers, including interactivity with customers at similar facilities located elsewhere and the imaging of such interactions on the screen 40.

Figure 3 is a top view showing an interior detail of the workstation system 12 depicted in FIG. 2. Adjacent to an outer perimeter 54 ramp 46 can be seen at the leftmost portion of the illustration which leads to a walkway 36 surrounded by handrail 44--both of which generally encircle an annular structure 52 supporting workstations 26 (seen in FIG. 2). Adjacent to an opposite segment of outer perimeter 54 is enclosed corridor 56 leading to external wall 32. Wall 32 has one or more ATM-Style ordering bay 28 which can also be equipped with a security camera 30. Like the workstations 26, bays 28 are also interactive and provide access to the robotic pick-and-place apparatus 18 and facilitate customer interaction and transactions 24 hours

per day, including purchases, rentals and rental returns. In an interior area 38 within the annular structure 52 is a secured inventory of goods 16. The scale of the depicted workstation system is such that the inventory is retained within approximately a thirty foot diameter making its storage capacity about 40,000 CD-sized CD, DVDs, CD-ROMs, and the like. Each storable item is given its own storage slot (not shown) having a position (height and radial position) that is assigned during stocking and maintained by a workstation networked device 14 and transaction/interaction record-keeping & updating software 122.

From the top view of FIG. 3 it can be seen that any one or more of the workstations 26 or bays 28 can be clearly designated for expedited-customer interaction for example, by easily readable workstation indicia, or coloring, etc., and that such areas can be scalable to include more workstations in the designated area to accommodate increases in scheduled customers. Additionally, if the area is designated by rope/stanchion boundary, such a perimeter is flexible enough to expand and contract a designated area as needed according to an ebb and flow of scheduled customers. Additionally, horizontal workstation pads 34 can be provided for other-abled individuals' access to workstations, for example those arriving in a wheelchair.

At the end of robotic arm(s) 70 a pick-and-place means 18 is shown which is suitable for placing goods in any one of a plurality location-specific merchandise slot 58 among an entire inventory of goods. Similarly, pick-and-place means 18 is configured to retrieve goods from location-specific slots 58 as needed. In either case, such placement or retrieval of goods is done in communication with the record-keeping software and record-updateable data of networked device 14, including the schedulable retrieval of goods according to the expedited-customer transactions occurring at the designated areas (i.e. workstations) of the facility. In addition to means 18 at the end of arm(s) 70, a light intensity sensing means 22 can also be employed, whereby slots that are empty reflect back light to a system-coupled, and system-communicating light emitter-detector pair that is measurably different from the light reflected by a filled slot. For instance, the interior of any empty slot can be comprised of a surface that promotes a light-reflectivity delta which is measurably different when contrasted against the light reflectivity of a filled slot. For example the interior of the slots can be flat black; or have a light-reflecting material such as light-reflective tape attached thereto which provides a brighter reflected light signal back to sensing means 22 than a occupied slot does. Goods that are stocked, retrieved, or re-stocked in a plurality of slot 58 are relationally databased according to slot height locations

and slot radial locations and can be cross-referenced by any one or more in a variety of entertainment-content categories including: content title; content-genre; content-artist; content-production company, and so forth (e.g. within the record-keeping software and record-updateable data of the networked device 14).

In one embodiment of the optimized networked-venue, the goods can be substantially standardized in size, for example, by stocking the standard-sized media of Audio CDs, DVDs, CD-Roms, CD-Based Video Games, and so forth. In which case, the approximate 30 foot diameter rack system within the annular structure 52 of networked-workstation system 12, would contain about forty thousand units with the units stored in slot-racks approximately 8 feet high. Substantially more units can be stored when a plurality of annularly-shaped (or other-shaped) racks are employed. For example, one or more racks can be placed in an area interior to the diameter of annular structure 52 (e.g. with additional annular-shaped racks having a diameter that is less than thirty feet).

The robotic pick-and-place means 18 located at the ends of arm(s) 70 are radially and vertically positionable to any merchandise-slot 58: 1.) they are radially positionable in a horizontal axis for example by the motion-control rotation of arm 70 to desired radial slot positions relative to a pre-determined 'home' position; and 2.) they are vertically positionable in a vertical axis to desired vertical slot positions by suitable vertical motion-control means such as a motion-controlled lead screw 60 which extends downward from the end of arm 70 (vertical length and travel subject to unit-rack height). Following the positioning of the pick-and-place means 18 to an alignment with merchandise in a merchandise slot, an electro-mechanically actuated gripping means is employed to grip the merchandise and move in an axis aligned with the slot until the merchandise is removed therefrom (this step is reversed for placing merchandise into a slot). The gripping means is also used when goods are delivered to a workstation, whereby the merchandise is gripped and aligned with a workstation delivery chute where it is released to slide down an incline to a merchandise reception bin accessible to the ordering customer (not shown). It is noted that the support and positioning of the pick-and-place unit(s) can be further enhanced by, suspension from above, or support from below, of an auxiliary rail system (e.g. one or more motion-controlled element supported by rollers gliding in an aligned rail system 62). In either case, the light intensity sensing means 22 located adjacent to pick-and-place means provide real-time inventorying or regular computer-audited inventorying of the entire stock of

goods as the pick-and-place means is moved. For example, during a regularly scheduled inventory such as every hour, or every shift, the computer motion control actuation of the robotic arm(s) 70 radially sweeps the sensing means 22 across each of the cumulative slots 58 of each horizontal height-row. It then vertically moves to subsequent horizontal height-rows to sweep their respective slots until the entire height of the stock has been swept/scanned. Thus, a computer-audited inventory of over forty thousand units is accomplished in less than a few minutes, upon demand or as scheduled. During normal pick-and-place activity the sensing means 22 can also be employed to verify slot occupancies and vacancies. In either case--whether scheduled, or during normal operation--databased information pertaining to the inventoried goods 18 is thereby updated, such that remote orders from a consumer's home or place of business, and local ordering (from the facility's workstations), ensures an item will always be on hand when it is shown to be among the current stock available, and can optionally be immediately ordered (for example, Just-In-Time 'JIT') from a supplier source when the stock is depleted, pre-sold (with a scheduled delay until the availability of the order), or reaches a particular unit-count threshold.

Additionally, the inventorying means can be configured to provide data to the facility's networked device 14 that arranges inventory information in a readily understandable manner for quick and easier analysis of the inventory. For example, stock that is moving the quickest among the inventoried columns and rows can be represented pictorially on a computer display screen in unit slots that are colored in hot colors (e.g. white, yellow, orange, red). Conversely, slow-moving inventory can be represented in cool colors (blue, green, gray, black). Additionally, such data can be cross-referenced or exportable to a spreadsheet format for numerical representations, and for coordinated ordering or re-ordering of additional inventory. Either approach, whether graphical or numerical, can be further parsed to show 'aging' of stock i.e. stock that has been retained in the inventory over extended periods of time and may be removed for replacement with newer inventory.

The automated system of the optimized networked-venue illustrates, by way of example, fourteen workstations and three additional ATM-style external workstations, all of which, in effect, function as order-taking and order-fulfilling stations, meaning that the facility is optimized for the scheduling and serving of no less than seventeen customers at a time--who can

quickly and easily browse on-screen represented goods, and retrieve on-screen selected goods by the system's internal robotics as desired. In contrast, a conventional entertainment-media retail and or rental facility would have to have a staff of no less than seventeen employees and seventeen cash registers to serve an equal number of customers simultaneously, and all of the stock in a conventional store would have to be secured by expensive security equipment and would have to first be hunted for by the customers (assuming desired goods are in stock). Furthermore, the condensing of the stock into the interior of the facility permits the number of goods to be securely stored within an optimized area that is one fifth of the real estate required for a conventional store having the same volume of stock. Thus, a substantial reduction in overhead is achieved by optimized networked-venues (e.g. in real estate, personnel/staffing, security staffing, inventorying, ordering, etc.). The thirty foot inner diameter otpionally permits the inclusion of entertainment-content replication equipment therein, and MP3 audio file downloading systems (the system uploads ordered medialess MP3 files or other digital audio file format to medialess-file ordering customers) as network bandwidth speeds increase and medialess audio files sales increase.

FIG. 3 further illustrates the employment of a ring of projectors 42 that are positioned to project panoramic, or segmented, imagery on a screen 40 (see also FIG. 2). The content of such imagery comprises any one or more in a variety of visual-content media suitable for projection of panoramic, or segmented, images onto a projection screen. The screen further secludes the facility's inventory and provides an engaging and dynamic 'storefront' that is always changing--versus the static appearance of conventional stores. When the workstations include cameras one or more projectors 42 can project workstation customers on the screen to promote customer interactivity at one or more venue having the networked-workstation system. Screen also ideally suited for displaying store promotions and contests, including interactive contests between customers and/or stores.

In a co-pending patent by the applicant of the present invention, various screen types and image exhibition equipment are described that are suitable for employment as the facility's screen 40.

Although the present invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made by way of example, and changes in detail or structure may be made without departing from the spirit of the invention in the previous descriptions or as defined in the appended claims.

CLAIMS

Claim 1. Apparatus and software for establishing a bi-directional communication link between at least one customer and a large publicly accessible communications network such as the Internet, and for providing an online dual-commerce system, comprising:

a.) a browser device having network-browsing software

b.) network connection means

c.) network-user identification and verification means

d.) at least one networked computer, software and user interface representing at least one networked-venue, said computer and software of a type which provides a current databased selection of available online-choices and available networked-venue-choices of goods, or services, or activities, or combinations thereof,

e.) software and user interface suitable for

i. providing communications with said networked computer(s), and for taking, recording, and reporting customer orders from choices provided by said current databased selection

ii. making at least one order from said available online-choices

iii. making at least one order from said available networked-venue choices whereby said order(s)

is scheduled and reserved according to a current condition of a chronological table of scheduled and available customer-events;

is downloadable in the form of an itinerary by said customer; and

is subsequently culminated following the scheduled arrival of the ordering customer at a physical location of said networked-venue(s) that is designated for expedited service, following the verification of the customer's identification and order by suitable identification and order verification means located at the physical location(s)

iv. automated database-condition editing, monitoring and reporting which,

is responsive to changes to said current databased selection when each online order is made, and when each online scheduled and reserved venue-order is made and subsequently culminated from said networked-venue(s); and which,

causes record-keeping and record-updating software routines to automatically record transaction details pertaining to said online order(s) and said scheduled and reserved order(s) and to update and report the availability of subsequent orderings, schedulings, and reservations to said current databased selection when any order is completed.

Claim 2. The browser device of claim 1 consisting of a handheld apparatus having wireless bi-directional connectivity to the Internet.

Claim 3. The browser device of claim 1 consisting of a computer and a modem.

Claim 4. The network browsing software of claim 1 consisting of a commercially available browser application.

Claim 5. The network browsing software of claim 1 consisting in the combination of a commercially available browser application and an Internet portal.

Claim 6. Said user interface of claim 1 wherein said interface comprises an Internet portal.

Claim 7. The network connection means of claim 1 consisting of an Internet connection made by an Internet Service Provider.

Claim 8. The identification and order verification means of claim 1 consisting of at least one commercially available customer identification and verification apparatus suitable for communication with said networked-computer.

Claim 9. The user interface and software suitable for establishing a communication link with said networked computer(s) of claim 1, further comprising at least one software routine for providing a customer with a printout record.

Claim 10. The ordering means of claim 1 further comprising at least one software routine for automatically providing a networked-venue merchant with transaction details pertaining to his venue's sales.

Claim 11. The ordering, scheduling and reservation means of claim 1 further comprising at least one software routine for automatically providing a networked-venue merchant with transaction details pertaining to schedulings and reservations.

Claim 12. The record-keeping and record-updating software of claim 1, further comprising at least one software routine for automatically providing a supplier of a networked-venue with transaction details pertaining to that venue's sales.

Claim 13. The record-keeping and record-updating software of claim 1, further comprising at least one software routine for automatically calculating and deducting a sales commission based on the type of online order made.

Claim 14. The ordering means of claim 1 further comprising at least one software routine for facilitating the delivery of online order(s) of goods to a customer.

Claim 15. The networked-venue and networked computer and software of claim 1 further comprising software routines for the confirmation of customer orders.

Claim 17. The networked-venue and networked computer and software of claim 1 further comprising software routines for the verifification of customer identification.

Claim 18. The customer identification software of claim 17 further consisting of at least one commercially available networkable customer identification and verification apparatus.

Claim 19. The browser device of claim 1 consisting of at least one networked computer located at a physical networked-venue.

Claim 20. The browser device of claim 1 consisting of at least one networked computer located at a facility which also incorporates a plurality of physical networked-venues.

Claim 21. The dual-commerce apparatus of claim 1 further comprising software routines for entering and recording financial transaction card information and for reporting transactions to at least one financial transaction card vendor.

Claim 22. The browser device of claim 1 consisting of at least one networked computer located at a physical networked-venue, said computer having a user interface that is similar in appearance and offers functionality similar to, an Automated Teller Machine (ATM) including means for reading, recording and reporting financial transaction card information.

Claim 23. The networked-venue of claim 1 further comprising a secured retail-inventory environment wherein networked workstations are arranged to secure an inventory of merchandise in an optimized workstation system such that said inventory is consolidated in a space-saving manner and is out of reach to customers until purchased, and wherein each of said workstations:

a.) comprises a networked computer having connectivity to at least one network, and has a user interface to facilitate transactions and interactions,

b.) has networked order-taking apparatus and software routines to facilitate user financial transactions and for reporting and recording said transactions,

c.) has record-keeping and record-updating software routines to automatically record transaction details pertaining to any workstation order and to update and report the availability of merchandise, according to the order(s) made.

Claim 24. The optimized networked workstation system of claim 23 further comprising an automated merchandise pick-and-place system for secured retail inventory comprising:

a.) at least one motion-control computer with motion-control software that is networked to the workstation system

b.) a multiplicity of securely located merchandise slots that are vertically aligned in columns and horizontally aligned in rows

c.) at least one computer-accessible record of the vertical position and horizontal position of each said merchandise slots

d.) at least one updateable computer-accessible record of the vertical position and horizontal position of of said merchandise slots and the type of merchandise stored therein

e.) at least one computer-accessible record of the vertical position and horizontal position of a receiving end of each workstation delivery chute located adjacent to each workstation

f.) a motion controller interface coupled between said motion-control computer(s) and electro-mechanical actuators

g.) at least one motion-controllable member that is positionable by said actuator(s) in a horizontal axis having a pick-and-place robotic apparatus operative from an end thereof that is positionable in a vertical axis by said actuator(s)

h.) an electro-mechanically actuated merchandise gripping means that is positionable to securely grip merchandise and move it in and out of any merchandise slot and to also move it into a receiving end of any workstation delivery chute

the combination of which is responsive to user input with, and control signals from, at least one computer that is networked to the workstation system to provide:

i. stocking, retrieval and re-stocking of merchandise; and

ii. automated delivery of said merchandise to a user's workstation chute by accessing at least one of said computer-storable record and communicating the record data to said motion-control computer for the computer-controlled positioning of said member(s), said pick-and-place robotic apparatus, and said gripping means

iii. merchant input from a networked computer for automated pick-and-place control of inventory.

Claim 25. The automated merchandise pick-and-place system for secured retail inventory of claim 24 further comprising rapid inventorying apparatus comprising at least one emitter-detector light sensing means that is positionable by computer motion-control to sweep in a controlled path past merchandise slots and interpret the difference in light reflectivity of vacant

container slots and container slots occupied with merchandise, and rapidly scans slot-empty states or slot-occupied states and records, maintains and reports all state-conditions of the inventory to said record-keeping and record-updating software.

Claim 26. The networked-venue of claim 1 further comprising a secured entertatinment-content replication environment and retail-inventory wherein networked workstations are arranged to secure entertainment-content replication equipment and an inventory of merchandise in an optimized workstation system such that said equipment and the product of thereof, and said inventory, is consolidated in a space-saving manner and is out of reach to customers until purchased, and wherein each of said workstations:

a.) comprises a networked-computer having connectivity to at least one network, and has a user interface to facilitate transactions and interactions,

b.) has networked order-taking apparatus and software routines to facilitate user ordering and financial transactions pertaining to said product and said inventory and for reporting and recording said transactions,

c.) has record-keeping and record-updating software routines to automatically record transaction details pertaining to any workstation order and to update and report the availability of merchandise, according to the order(s) made.

Claim 27. The workstation system of claim 23 further comprising at least one ATM style workstation which adjoins an exterior wall of the networked-venue and provides workstation functionality.

Claim 28. The workstation system of claim 23 wherein each of said workstations has hi-speed connectivity and provides interactivity with the workstations of at least one other workstation system.

Claim 29. The customer ordering means of claim 1 further comprising multimedia-playback software routines and at least one type of multimedia content for facilitating customer transactions with the playback of said multimedia content.

Claim 30. The customer ordering means of claim 29 wherein the multimedia-playback means features multimedia content having meaning that is relevant to the context of customer transactions and interactions, and is synchronous thereto, and helps to facilitate order decisions.

Claim 31. The apparatus and software of claim 1 wherein said at least one computer consists of at least one networked server computer and software having a communication link with at least one client computer and software.

Claim 32. The dual-commerce system of claim 1 wherein said physical location of said networked-venue(s) designated for expedited service, is schedulable up to 100% flow rate of scheduled customers.

Claim 32. The dual-commerce system of claim 1 wherein said physical location of said networked-venue(s) designated for expedited service, is scalable to accommodate increased scheduled customer flow rates.

Claim 33. The optimized networked workstation system of claim 23 wherein each of said workstations provide software and hardware means for browsing, previewing, ordering, uploading, and keeping a computer-accessible record of order transaction details pertaining to orders for, and uploadings of, medialess digitally-recorded entertainment-content such as MP3 (Mpeg 3) files that are ordered and received by customers having networked communication with said system.

Claim 34. The networked communication of claim 33 consisting in bi-directional communication between said workstation(s) and at least one wireless handheld device suitable for receiving digitally-recorded files.

Claim 35. The networked communication of claim 33 consisting in bi-directional communication between said workstation(s) and at least one coupled handheld device suitable for receiving digitally-recorded files.

Claim 36. The customer identification and order verification means of the networked-venue(s) of claim 1 further comprising bi-directional communication link with at least one wireless handheld device.

Claim 37. The apparatus and software of claim 1 further consisting of means for a customer download said itinerary to a wireless device.

Claim 38. A dual-commerce method enabling a customer to place online orders over a network such as the Internet including orders that are schedulable and reserveable and provide a customer scheduled excursion to at least one networked-venue which offers deliverables that the customer has ordered online, comprising the steps of:

a.) establishing a bi-directional communication link between a customer browsing device and a large publicly accessible communications network such as the Internet, and at least one dual-commerce networked-venue represented at an Internet portal site

b.) accessing a current databased selection of available online-choices, and available networked-venue-choices of goods, or services, or activities, or combinations thereof, available to the customer(s) both online and from at least one physical location of said networked-venue(s)

c.) establishing a communication link with at least one networked computer(s) at said networked-venue(s)

d.) accessing software and user interface for making choices pertaining to said current databased selection and for making at least one order from said choices online

e.) accessing customer ordering, reservation and scheduling means for making choices pertaining to said current databased selection and for making and recording at least one order from said choices online which is schedulable and reserveable according to a current condition of a chronological table of scheduled and available customer-events

f.) making at least one networked-venue order online, downloading an itinerary which when followed subsequently completes the order with the scheduled arrival and interaction of the customer at said physical location of said networked-venue(s) that is designated for expedited service, following the verification of the customer's

identification and order by suitable identification and order verification means located at the physical location

g.) automatically updating current databased selection when each online order is made, and when each reserved and scheduled order is made and subsequently culminated from said networked-venue(s), and causing record-keeping and record-updating software routines to automatically record transaction details pertaining to said online order(s) and said scheduled and reserved order(s) and to update and report the availability of subsequent orderings, schedulings and reservations to said current databased selection when any order is completed.

Claim 39. Dual-commerce system for establishing a bi-directional communication link between at least one customer and a large publicly accessible communications network such as the Internet, comprising:

a.) a browser device having network-browsing software

b.) network connection means

c.) network-customer identification and verification means

d.) at least one dual-commerce networked-venue represented by at least one networked computer and software, said computer and software of a type which provides a current databased selection of available merchandise, or services, or activities, or combinations thereof, available to said customer(s) both online and from at least one physical location of said networked-venue(s)

e.) software and user interface suitable for

i. providing communications with said networked computer(s), and for taking, recording, and reporting customer orders from choices provided by said current databased selection

ii. making at least one order from said available online-choices

iii. making at least one order from said available networked-venue choices whereby said order(s)

is scheduled and reserved according to a current condition of a chronological table of scheduled and available customer-events;

is downloadable in the form of an itinerary by said customer; and

is subsequently culminated following the scheduled arrival of the ordering customer at a physical location of said networked-venue(s), following the verification of the customer's identification and order by suitable identification and order verification means located at the physical location(s)

iv. automated database-condition editing, monitoring and reporting which, is responsive to changes to said current databased selection when each online order is made, and when each online scheduled and reserved venue-order is made and subsequently culminated from said networked-venue(s); and which, causes record-keeping and record-updating software routines to automatically record transaction details pertaining to said online order(s) and said scheduled and reserved order(s) and to update and report the availability of subsequent orderings, schedulings, and reservations to said current databased selection when any order is completed.

ABSTRACT

Means for establishing a bi-directional communication link between at least one customer and a large publicly accessible communications network such as the Internet and providing dual-commerce ordering, reservation and scheduling system. The system comprises one or more browser device; network connection means; network-user identification and verification means; browsing/interface means such as a portal or other Internet site; and, at least one dual-commerce networked-venue. The system's computer and software provides a current databased selection of available merchandise, or services, or activities, or combinations thereof. The online databased selection represented to the customers are available online and from a physical location of at least one networked-venue(s). The system has a user interface and software that provides communication with the networked computer(s) at one or more networked-venue, and for representing customer ordering means pertaining to the current databased selection and for making at least one order from the choices offered online. Online orders of deliverables retrievable at networked-venues, are schedulable and reserveable and downloadable to customers in the form of an itinerary of sequenced customer-events, and such orders are subsequently culminated and reported to the system following: the scheduled arrival of the ordering customer at the physical location of networked-venue(s) and verification of the customer's identification by identification verification apparatus located at the physical location. Record-keeping and record-updating software routines automatically record transaction details pertaining to online order(s), and scheduled/reserved order(s), and update and report the availability of subsequent orderings, schedulings and reservations to the current databased selection according to the order(s) made.

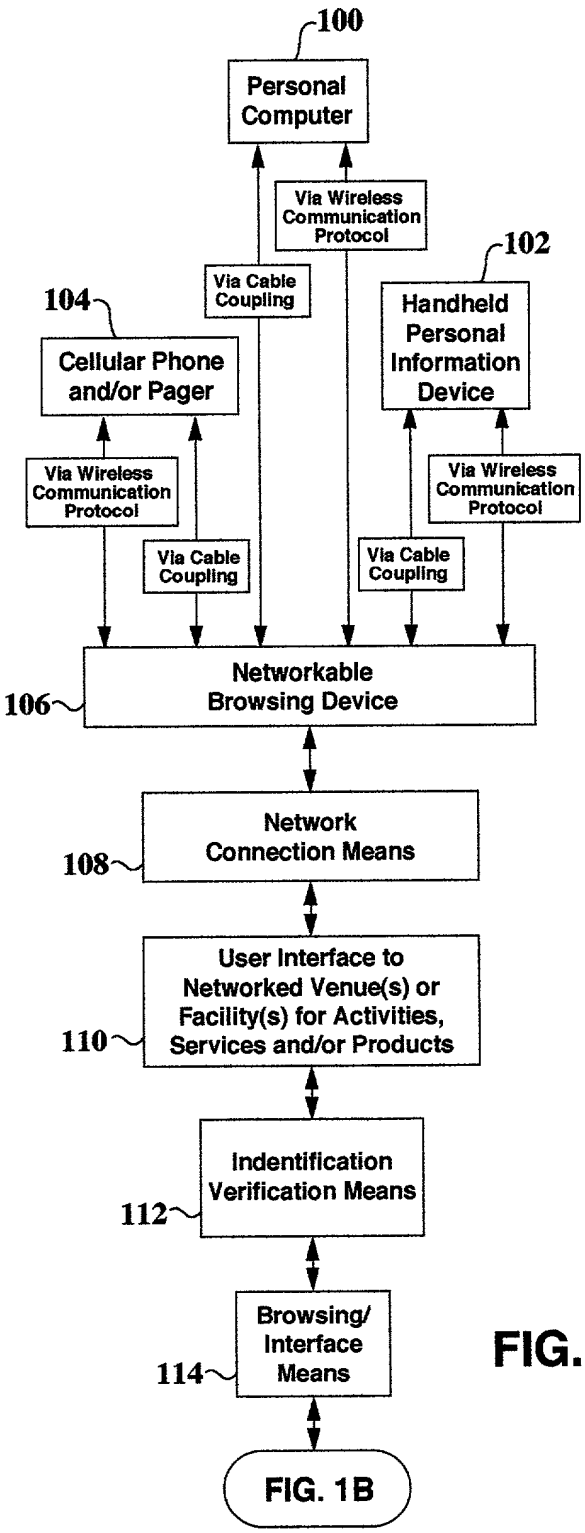
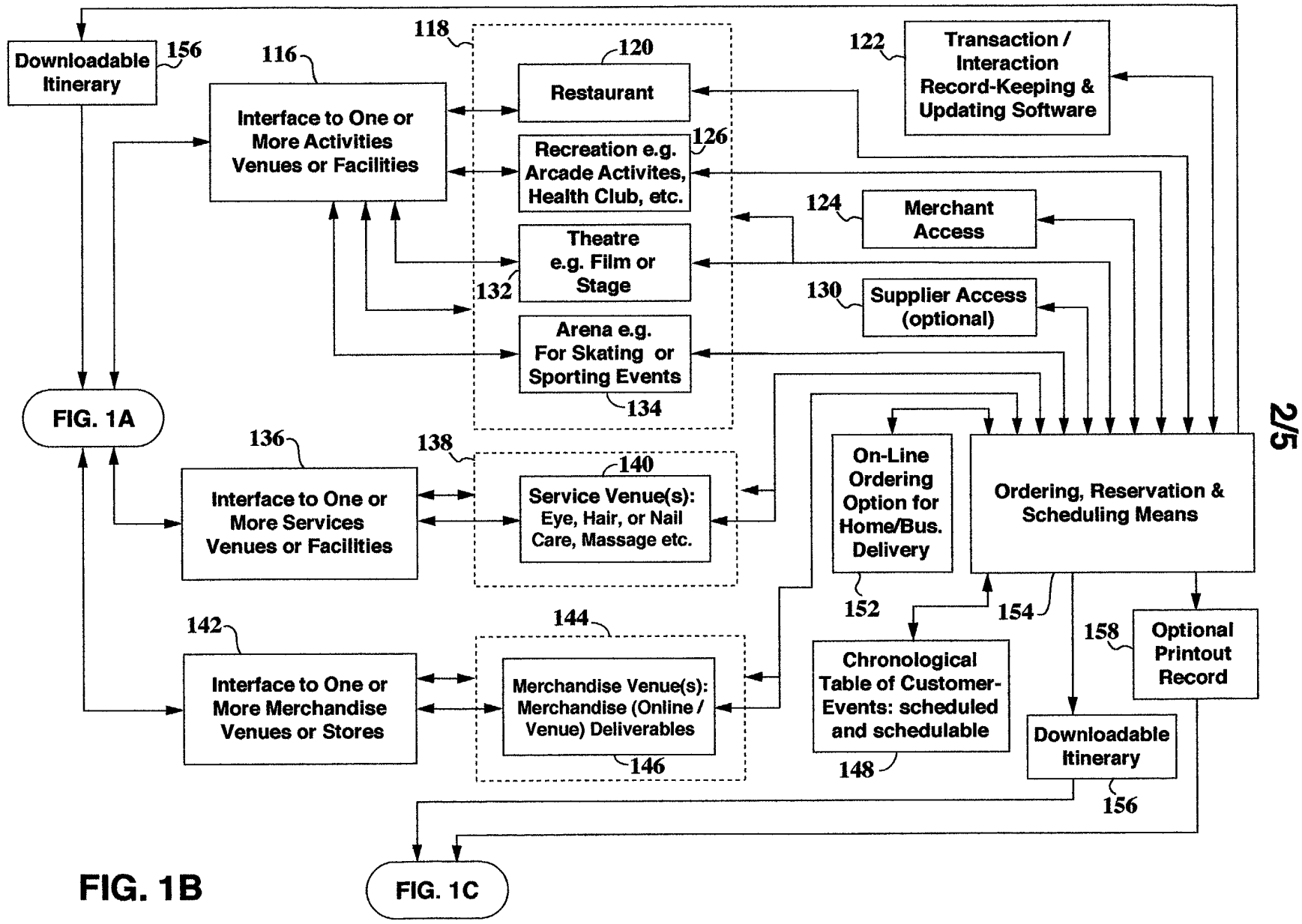

100
Personal Computer
Via Wireless Communication Protocol
102
Via Cable Coupling
104
Handheld Personal Information Device
Cellular Phone and/or Pager
Via Wireless Communication Protocol
Via Wireless Communication Protocol
Via Cable Coupling
Via Cable Coupling
Networkable Browsing Device
106
Network Connection Means
108
User Interface to Networked Venue(s) or Facility(s) for Activities, Services and/or Products
110
Indentification Verification Means
112
Browsing/ Interface Means
114
FIG. 1B

FIG. 1A


Downloadable Itinerary
156
116
Interface to One or More Activities Venues or Facilities
118
120
Restaurant
Recreation e.g. Arcade Activites, Health Club, etc.
126
Theatre e.g. Film or Stage
132
Arena e.g. For Skating or Sporting Events
134
122
Transaction / Interaction Record-Keeping & Updating Software
124
Merchant Access
130
Supplier Access (optional)
FIG. 1A
136
Interface to One or More Services Venues or Facilities
138
140
Service Venue(s): Eye, Hair, or Nail Care, Massage etc.
142
Interface to One or More Merchandise Venues or Stores
144
Merchandise Venue(s): Merchandise (Online / Venue) Deliverables
146
On-Line Ordering Option for Home/Bus. Delivery
152
Ordering, Reservation & Scheduling Means
154
Chronological Table of Customer-Events: scheduled and schedulable
148
158
Optional Printout Record
Downloadable Itinerary
156
FIG. 1B
FIG. 1C

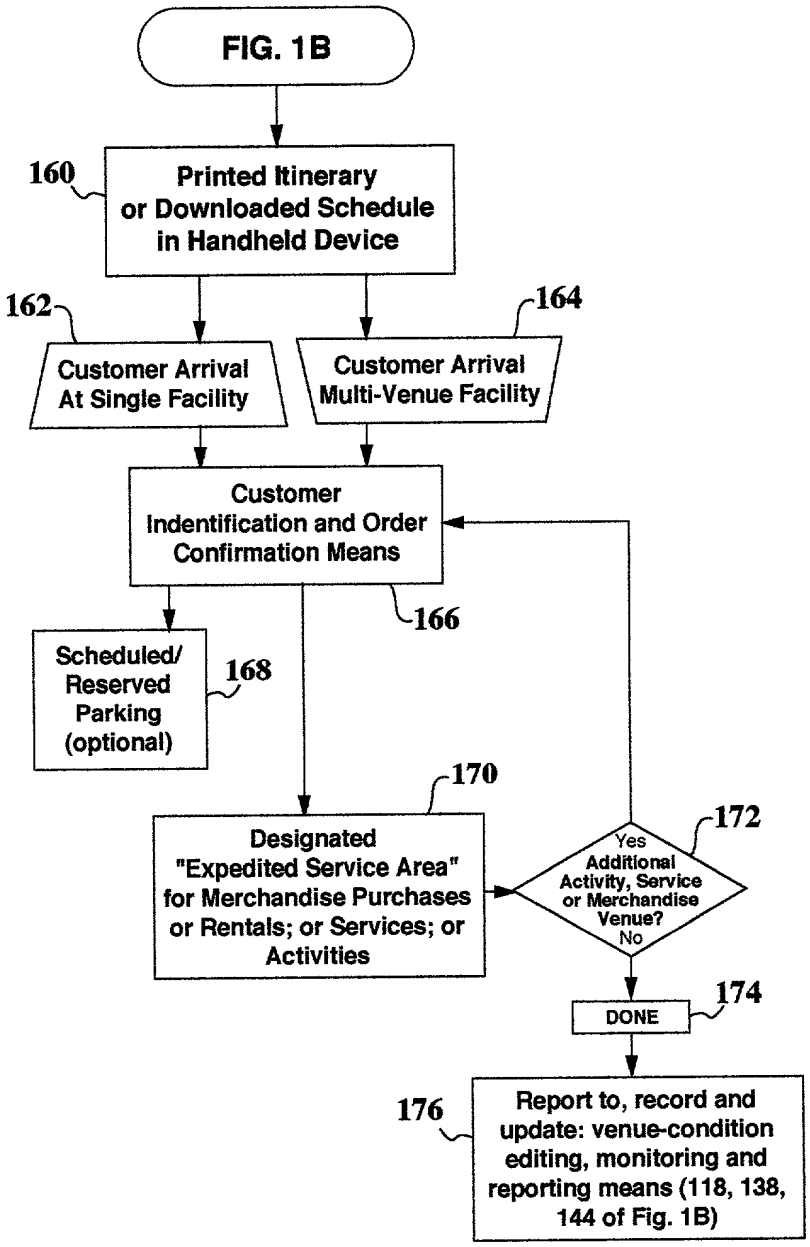


FIG. 1B
160
Printed Itinerary or Downloaded Schedule in Handheld Device
162
Customer Arrival At Single Facility
164
Customer Arrival Multi-Venue Facility
Customer Indentification and Order Confirmation Means
166
Scheduled/ Reserved Parking (optional)
168
170
Designated "Expedited Service Area" for Merchandise Purchases or Rentals; or Services; or Activities
172
Yes
Additional Activity, Service or Merchandise Venue?
No
DONE
174
176
Report to, record and update: venue-condition editing, monitoring and reporting means (118, 138, 144 of Fig. 1B)

FIG. 1C

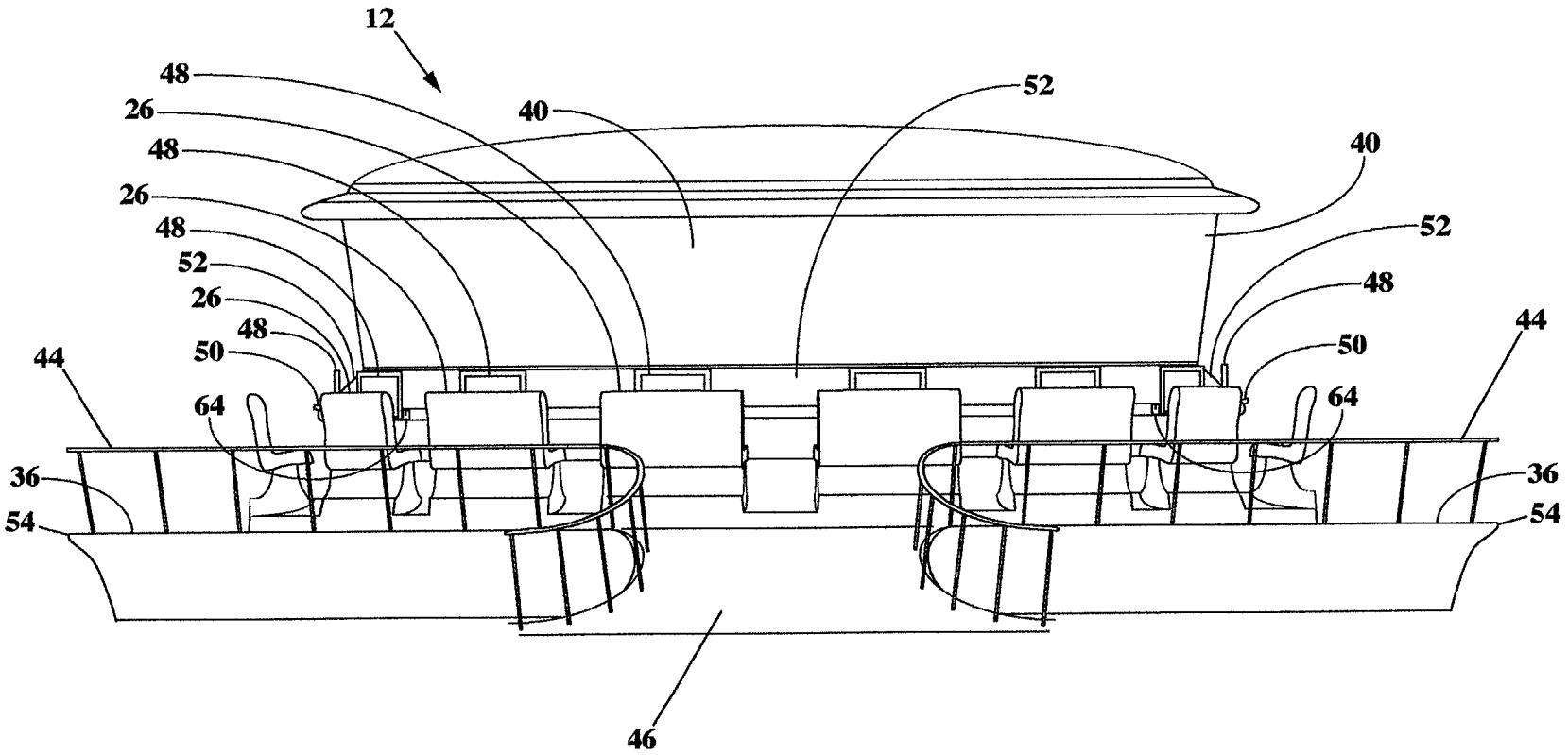

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FIG. 2

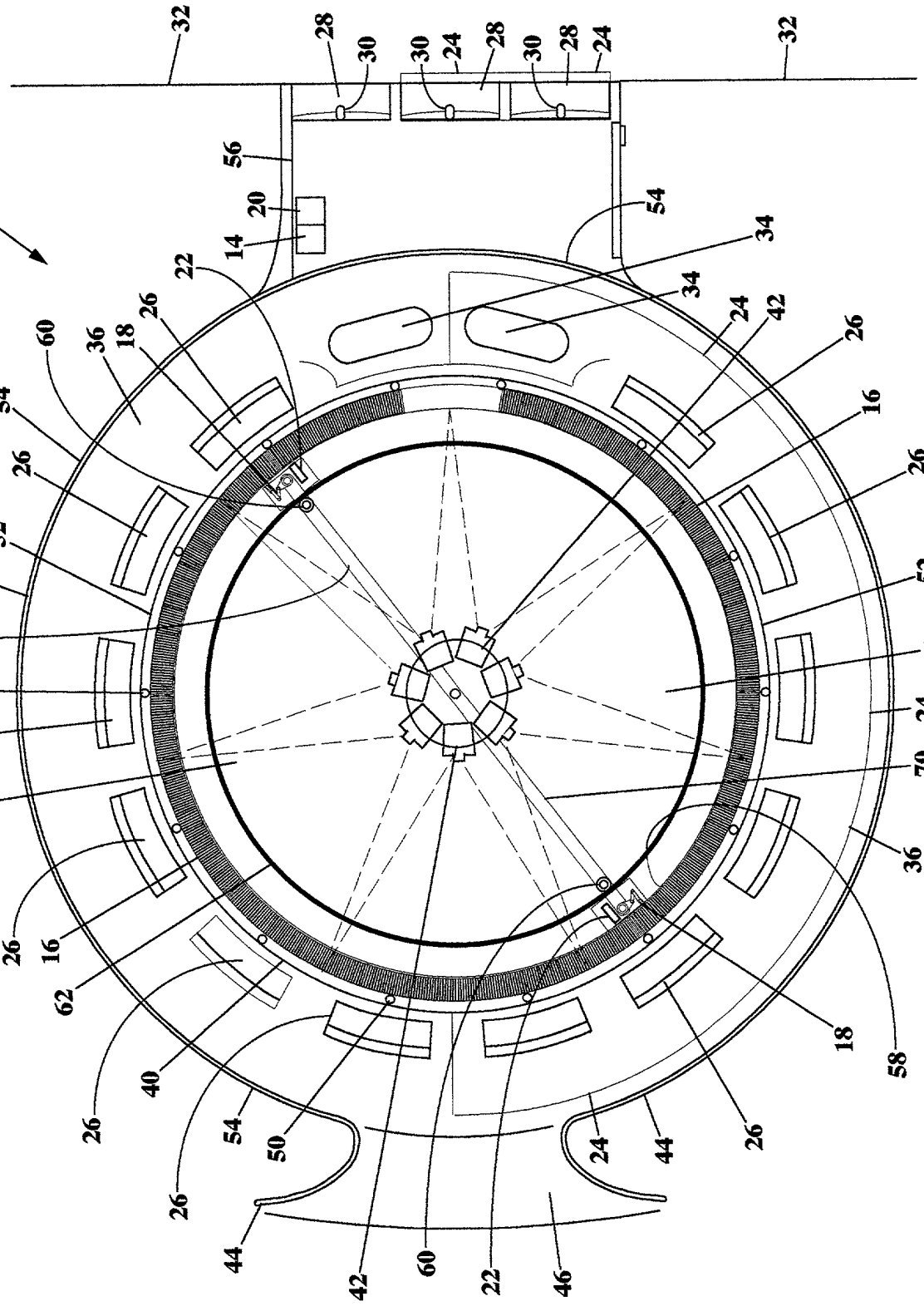
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FIG. 3

DECLARATION – ORIGINAL APPLICATION	ATTORNEY'S DOCKET NO.

As a below-named inventor, I hereby declare that:
my residence, post office address and citizenship are as stated below next to my name;
I verily believe I am the original, first and sole inventor (if only one name is listed below at 201) or a joint inventor (if plural inventors are named below at 201-203) of the invention entitled Ordering, Scheduling and Reservation System for Expedited Commerce Between an Internet Browsing Apparatus and One or More Physical Venues
which is described and claimed in the attached specification;
I do not know and do not believe that the invention was ever known or used in the United States of America before my or our invention thereof;
I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application;
I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application;
I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application;
the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application; and
as to applications for patents or inventor's certificate on the invention filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns,

- [x] no such applications have been filed, or
- [ ] such applications have been filed as follows:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS PRIOR TO THIS APPLICATION

COUNTRY	APPLICATION NO.	DATE OF FILING (DAY, MO., YR.)	DATE OF ISSUE (DAY, MO., YR.)	PRIORITY CLAIMED UNDER 35 USC 119
				YES ☐ NO ☐
				YES ☐ NO ☐

ALL FOREIGN APPLICATIONS, IF ANY, FILED MORE THAN 12 MONTHS PRIOR TO THIS APPLICATION

SEND CORRESPONDENCE TO:
Darrell Metcalf
905 N. Oak Avenue
Fillmore, CA 93015

DIRECT TELEPHONE CALLS TO: *(name and telephone number)*
Darrell Metcalf
(805) 524-1747

201	FULL NAME OF INVENTOR	FAMILY NAME: Metcalf	FIRST GIVEN NAME: Darrell	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY: Fillmore	STATE OR FOREIGN COUNTRY: California	COUNTRY OF CITIZENSHIP: USA
	POST OFFICE ADDRESS	POST OFFICE ADDRESS: 905 N. Oak Ave	CITY: Fillmore	STATE & ZIP CODE/COUNTRY: CA 93015
202	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY

(continued)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
Darrell Metcalf		
DATE	DATE	DATE
July 17, 2000		